

WHAT IS CLAIMED IS:

1. A cleaning apparatus comprising:
a cleaning member by for collecting toner;
toner carrying means for carrying the collected
5 toner contacting with a surface of an image bearing
body for bearing a toner image; and
a toner breaking member disposed in the vicinity
of a contact portion between said image bearing body
and said cleaning member for breaking the toner in the
10 vicinity of said contact portion,
wherein said toner breaking member moves in
association with a toner conveying operation of said
toner conveying means.
- 15 2. A cleaning apparatus according to claim 1,
wherein at least a part of said toner breaking member
is disposed in a position where said part interferes
with said toner conveying means.
- 20 3. A cleaning apparatus according to claim 2,
wherein said toner conveying means has a conveying
screw, and said toner breaking member is disposed so as
to interfere with a rotational region of said conveying
screw.
- 25 4. A cleaning apparatus according to claim 3,
wherein said toner breaking member has a plurality of

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free end portions, and said plurality of free end portions interfere with the rotational region of said conveying screw.

5 5. A cleaning apparatus according to claim 1, wherein said cleaning member has a coating layer formed of a material with higher hardness than that of a base member forming said cleaning member at a contact portion at least with said image bearing body.

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6. A cleaning apparatus according to claim 5, wherein said coating layer is made of nylon in which carbon fluoride is dispersed.

15 7. A cleaning apparatus according to claim 1, further comprising toner receiving means disposed on the upstream side in the image bearing body moving direction of a contact portion between said image bearing body and said cleaning member for receiving the
20 toner collected by said cleaning member.

8. A cleaning apparatus according to claim 2, further comprising cleaning member moving means for holding said cleaning member and moving in
25 reciprocation in a longitudinal direction of the image bearing body,

wherein said toner breaking member is coupled

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with said cleaning member moving means.

9. A cleaning apparatus according to claim 5,
wherein said base member is made of polyurethane.

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10. A cleaning apparatus comprising:

a cleaning member for collecting toner by
contacting with a surface of an image for bearing
member bearing a toner image;

10 cleaning member moving means for holding said
cleaning member and moving in reciprocation in a
longitudinal direction of the image bearing body;

a toner breaking member coupled with said
cleaning member moving means and disposed in the
15 vicinity of a contact portion between said image
bearing body and said cleaning member for breaking the
toner in the vicinity of said contact portion; and
toner conveying means for conveying the collected
toner,

20 wherein at least a part of said toner breaking
member is arranged in a position where said part
interferes with said toner conveying means.

11. A cleaning apparatus according to claim 10,
25 wherein said toner conveying means includes a conveying
screw, and

said toner breaking member is arranged so as to

interfere with a rotational region of said conveying screw.

12. A cleaning apparatus according to claim 11,
5 wherein said toner breaking member has a plurality of free end portions, said plurality of free end portions interfere with the rotational region of said conveying screw.

10 13. A cleaning apparatus according to claim 10, wherein said cleaning member has a coating layer formed of a material with higher hardness than that of a base member forming said cleaning member at a contact portion at least with said image bearing body.

15 14. A cleaning apparatus according to claim 13, wherein said coating layer is made of nylon in which carbon fluoride is dispersed.

20 15. A cleaning apparatus according to claim 10, further comprising toner receiving means disposed on the upstream side in the image bearing body moving direction of a contact portion between said image bearing body and said cleaning member for receiving the
25 toner collected by said cleaning member.

16. A cleaning apparatus according to claim 13,

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wherein said base member is made of polyurethane.

17. An image forming apparatus comprising:

image forming means for forming a toner image on
5 a surface of an image bearing body;

transfer means for transferring the toner image
on said image bearing body to a recording material;

a cleaning member contacting with a surface of
said image bearing body for collecting toner;

10 toner conveying means for conveying the collected
toner; and

a toner breaking member disposed in the vicinity
of a contact portion between said image bearing body
and said cleaning member for breaking the toner in the
15 vicinity of said contact portion,

wherein said toner breaking member moves in
cooperation with a toner conveying operation of said
toner conveying means.

20 18. An image forming apparatus according to claim
17, wherein at least a part of said toner breaking
member is located in a position where said part
interferes with said toner conveying means.

25 19. An image forming apparatus according to claim
18, wherein said toner conveying means includes a
conveying screw, and

said toner breaking member is arranged so as to interfere with a rotational region of said conveying screw.

5 20. An image forming apparatus according to claim 19, wherein said toner breaking member has a plurality of free end portions, and said plurality of free end portions interfere with the rotational region of said conveying screw.

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21. An image forming apparatus according to claim 19, wherein said cleaning member has a coating layer formed of a material with higher hardness than that of a base member forming said cleaning member at a contact
15 portion at least with said image bearing body.

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22. An image forming apparatus according to claim 21, wherein said coating layer is made of nylon in which carbon fluoride is dispersed.

23. An image forming apparatus according to claim 17, further comprising toner receiving means disposed on the upstream side in the image bearing body moving direction of a contact portion between said image
25 bearing body and said cleaning member for receiving the toner collected by said cleaning member.

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24. An image forming apparatus according to claim
18, further comprising cleaning member moving means for
holding said cleaning member and moving in
reciprocation in a longitudinal direction of the image
5 bearing body,

wherein said toner breaking member is coupled
with said cleaning member moving means.

25. An image forming apparatus according to claim
10 21, wherein said base member is made of polyurethane.

26. An image forming apparatus comprising:
image forming means for forming a toner image on
a surface of an image bearing body;
15 transfer means for transferring the toner image
on said image bearing body to a recording material;
a cleaning member contacting with a surface of
said image bearing body for collecting toner;
cleaning member moving means for holding said
20 cleaning member and moving in reciprocation in a
longitudinal direction of the image bearing body;
a toner breaking member coupled with said
cleaning member moving means and disposed in the
vicinity of a contact portion between said image
25 bearing body and said cleaning member for breaking the
toner in the vicinity of said contact portion; and
toner conveying means for conveying the collected

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toner,

wherein at least a part of said toner breaking member is located in a position where said part interferes with said toner conveying means.

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27. An image forming apparatus according to claim 26, wherein said toner conveying means includes a conveying screw, and said toner breaking member is arranged so as to interfere with a rotational region of
10 said conveying screw.

28. An image forming apparatus according to claim 27, wherein said toner breaking member has a plurality of free end portions, and said plurality of free end
15 portions interfere with the rotational region of said conveying screw.

29. An image forming apparatus according to claim 26, wherein said cleaning member has a coating layer
20 formed of a material with higher hardness than that of a base member forming said cleaning member at a contact portion at least with said image bearing body.

30. An image forming apparatus according to claim 29, wherein said coating layer is made of nylon in
25 which carbon fluoride is dispersed.

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31. An image forming apparatus according to claim
26, further comprising toner receiving means disposed
on the upstream side in the image bearing body moving
direction of a contact portion between said image
5 bearing body and said cleaning member for receiving the
toner collected by said cleaning member.

32. An image forming apparatus according to claim
29, wherein said base member is made of polyurethane.

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